

Staudamm – a serious game on reservoir management

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Serious games can be useful to teach students about real-world challenges. Here we present a first prototype of the online game 'Staudamm'. In this game, each player operates a multi-purpose water reservoir. The goal is to optimize revenues from the dam by balancing flood protection, electricity production, and irrigation-water supply, while fulfilling the minimal requirements for environmental flows.

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the prototype?
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For flood protection, an almost empty reservoir would be optimal, whereas for electricity production and irrigation-water supply a fully filled reservoir would be preferable for at least at some time during the year. While there are some seasonal patterns in the inflows to the reservoir, balancing the different objectives is difficult, as one never exactly knows how much water will enter the reservoir. The game illustrates the difficulty in balancing multiple objectives, as well as the use of uncertain predictions in decision-making.



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